

WHAT IS CLAIMED IS:

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- 1. An antimicrobial composition comprising:
 in the range of 0.01 to 5 wt. % of a C6-C12 fatty acid; and
 a carrier medium including a freezing point depressant component, wherein
- 5 the freezing point depressant component makes up greater than 60 wt. % of the total composition.
 - 2. The antimicrobial composition of claim 1, wherein the fatty acid is C7-C9.
- 10 3. The antimicrobial composition of claim 1, wherein the fatty acid is heptanoic acid.
 - 4. The antimicrobial composition of claim 1, wherein the freezing point depressant component is selected from polyol or mixtures thereof.

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5. The antimicrobial composition of claim 4, wherein the freezing point depressant component is selected from propylene glycol, glycerin, and mixtures thereof.

The antimicrobial composition of claim 5, wherein the freezing point depressant component is a mixture of propylene glycol and glycerin.

- 7. The antimicrobial composition of claim 1, wherein the composition has a freezing point of below 32°F.
- 8. The antimicrobial composition of claim 1, wherein the composition has a
 5 freezing point of below 20°F.
 - 9. The antimicrobial composition of claim 1, wherein the composition has a freezing point of below 10°F.
- 10 10. The antimicrobial composition of claim 1, wherein the composition has a freezing point of below 0°F.
 - 11. The antimicrobial composition of claim 1, wherein the composition has a freezing point of below -10°F.

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- 12. The antimicrobial composition of claim 1, wherein the composition has a freezing point of below -20°F.
- 14. The antimicrobial composition of claim 1, wherein the freezing point depressant component makes up greater than 65 wt. % of the total composition.
 - 15. The antimicrobial composition of claim 1, wherein the freezing point depressant component makes up greater than 70 wt. % of the total composition.

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- 16. The antimicrobial composition of claim 1, wherein the freezing point depressant component makes up greater than 75 wt. % of the total composition.
- 5 17. An antimicrobial composition comprising:

in the range of 0.01 to 5 wt. % of heptanoic acid; and

greater than 60 wt. 1% of a freezing point depressant component comprising

propylene glycol and glycering

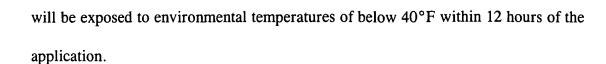
18. An antimicrobial composition comprising:

an antimicrobial component consisting essentially of heptanoic acid, and a carrier medium.

19. A method for controlling mastitis in milk producing animals, the method15 comprising:

applying an antimicrobial composition to a text of an animal wherein the antimicribial composition comprises in the range of 0.01 to 5 wt. % of a C6-C12 fatty acid and a carrier medium including a freezing point depressant component, wherein the freezing point depressant component comprises greater than 60 wt. % of the composition.

20. The method of claim 19, wherein the antimicrobial composition is applied in environmental temperatures of below 40°F or is applied to the teat of an animal that



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30**%**F

20°F.

1. The method of claim 20, wherein the environmental temperatures of below

22. The method of claim 20, wherein the environmental temperatures of below

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- 10 23. The method of claim 20, wherein the environmental temperatures of below 10°F.
 - 24. The method of daim 19, wherein the fatty acid is C7-C9.
- 15 25. The method of clared 19, wherein the fatty acid is heptanoic acid.
 - 26. The method of claim 19, wherein the freezing point depressant component is selected from polyols or mixtures thereof.
- 20 27. The method of claim 26, wherein the freezing point depressant component is selected from the group consisting of propylene glycol, glycerin, and mixtures thereof.



- 28. The method of claim 27, wherein, wherein the freezing point depressant component is a mixture of propylene glycol and glycerin.
- 29. The method of claim 19, wherein the composition has a freezing point of below 32°F.
- 30. The method of claim 19, wherein the composition has a freezing point of below 20°F.
- 10 31. The method of claim 19, wherein the composition has a freezing point of below 10°F.
 - 32. The method of claim 19, wherein the composition has a freezing point of below 0°F.

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- 33. The method of claim 19, wherein the composition has a freezing point of below -10°F.
- 34. The method of claim 19, wherein the composition has a freezing point of below -20°F.
 - 35. The method of claim 19, wherein the freezing point depressant component makes up greater than 65 wt. % of the total composition.

- 36. The method of claim 19, wherein the freezing point depressant component makes up greater than 70 wt. % of the total composition.
- 5 37. The method of claim 19, wherein the freezing point depressant component makes up greater than 75 wt. % of the total composition.